

IN THE CLAIMS

1. (Previously Presented) A method comprising:
clearing a plurality of first connections in bulk between a first node and a second node of an ATM network from the first node; and
for each said clearing, sending a first message from the first node to the second node, the first message comprising a single bulk release message from the first node to the second node containing an identification of the first connections, the identification comprising a list of connection identifiers allowing both of consecutive connection identifiers and non-consecutive connection identifiers.
2. (Previously Presented) The method defined in claim 1 further including:
receiving the first message at the second node;
clearing the first connections from the second node in response to the received first message; and
sending a single second message from the second node to the first node in response to the clearing of the first connections from the second node and receiving the first message identifying at least one of the connections cleared in response to the received first message, and the first message.
3. (Original) The method defined in claim 2 further including enabling an interpretation of the received first message wherein the clearing from the second node depends upon the enabling.
4. (Original) The method defined in claim 2 further including:
the first node maintaining a database of at least one of a connections cleared and identified in the first message; and
both a connections cleared and identified in the first message, and
a connections cleared and identified in the first message but not identified in the second message; and

the first node receiving the second message sent from the second node to the first node.

5. (Original) The method defined in claim 4 wherein each clearing defined in claim 1 has an associated distinct identification, and further the database uses as a root for the connections cleared and identified in each first message the distinct associated identification.

6. (Previously Presented) A method comprising:
receiving a first message comprising a single bulk release message by a first node of an ATM network from a second node of the ATM network connected to the first node by at least one first connections, wherein the single bulk release message comprises a list of connection identifiers allowing both of consecutive connection identifiers and non-consecutive connection identifiers;
clearing the first connections from the second node in bulk in response to receiving the first message; and
sending a second message from the first node to the second node, the second message identifying at least one of the first connections cleared from the second node and the first message.

7. (Original) The method defined in claim 6 further including enabling an interpretation of the received first message wherein the clearing from the first node depends upon the enabling.

8. (Previously Presented) The method defined in claim 6 further including:
clearing the first connections from the second node; wherein the first message includes an identification of the first connections.

9. (Previously Presented) A method of clearing a plural number of connections between a first node and a second node in an Asynchronous Transfer Mode network including:

sending at least one first message comprising a single bulk release message from the first node to the second node, wherein each first message comprises a list of connection identifiers allowing both of consecutive connection identifiers and non-consecutive connection identifiers, each first message including an identification of at least one of

each of a plural number of first connections to be cleared in bulk from the second node by the first message, and

each of a plural number of first connections that is one of
cleared from the first node and
to be cleared from the first node.

10. (Original) The method defined in claim 9 further including for each said first message, clearing from the first node each said first connection.

11. (Original) The method defined in claim 9 wherein the first message is consistent with an Asynchronous Transfer Mode formatted message.

12. (Original) The method defined in claim 9 further including enabling the first node to send the first message before the sending.

13. (Original) The method defined in claim 9 wherein the sending is in response to a requirement for a clearing of a plural number of first node connections.

14. (Original) The method defined in claim 9 wherein the sending is in response to an event that includes at least one of:

a received Physical interface reset command,
a received Virtual interface reset command,
a received Datalink Layer Service-Specific Connection-Oriented Protocol reset,
a received Global path ATM Forum defined RESTART message,

a received Virtual Path ATM Forum defined RESTART message,
a received plural number of RELEASE messages, and
a received Force Reroute in a Semi-Permanent Switched Virtual Circuit based network.

15. (Original) The method defined in claim 9 wherein the first message includes at least an identification of each of the first connections to be cleared from the second node, and further including:
the second node receiving the first message, and
the second node clearing each of the connections in the second node identified as to be cleared from the second node in the first message in response to receiving the first message.

16. (Original) The method defined in claim 10 further including the first node placing into a first database a record that includes an identification of each first connection cleared from the first node.

17. (Original) The method defined in claim 10 further including:
the first node placing into a first database a first record that includes an identification of each first connection cleared from the first node, and into a second database a second record that includes an identification of each first connection cleared from the first node;
the second node receiving each first message;
the second node clearing each of the first connections identified in each received first message;
the second node sending a second message to the first node in response to each received first message that includes an identification of each connection that is one of cleared and to be cleared from the second node;
the first node in response to receiving each second message, deleting from the second database the identification of each connection identified in the second message.

18. (Original) The method defined in claim 15 further including enabling the second node to receive the first message before the receiving.
19. (Previously Presented) The method defined in claim 15 further including sending at least one of
a connection message to the first node identifying the connections cleared by the second node in response to the second node receiving the first message, and
an identification message to the first node identifying the first message received by the second node.
20. (Original) The method defined in claim 15 further including enabling the second node to send the first message before the sending.
21. (Original) The method defined in claim 17 further including enabling the first node to receive the second message before the second node sending the second message.
22. (Original) The method defined in claim 17 wherein an index in each said first record includes the identification of a first connection.
23. (Original) The method defined in claim 17 wherein an index in each second record includes the identification of a first connection.
24. (Original) The method defined in claim 17 wherein a root of the first database is an identification of the first message.
25. (Original) The method defined in claim 17 wherein a root of the second database is an identification of the first message.

26. (Original) The method defined in claim 19 further including enabling the first node to receive the second message before the sending of a second message to the first node.

27. (Previously Presented) An Asynchronous Transfer Mode (ATM) node that includes

a first circuit that generates an inter-nodal call control first message comprising a single bulk release message containing an identification of at least one of each of a plural number of first connections to be cleared in bulk at an ATM first node to be coupled to the ATM node, and each of a plural number of first connections that is one of cleared from the ATM node and to be cleared from the ATM node, wherein the single bulk release message comprises a list of connection identifiers allowing both of consecutive connection identifiers and non-consecutive connection identifiers; and

a second circuit to transmit the first message to the first node.

28. (Original) The ATM node defined in claim 27 that further includes a circuit to enable one of the generation of the first message and the transmission of the first message, in response to an input if the ATM node was disabled; and to disable the ATM node from one of the generation of the first message and the transmission of the first message in response to an input if the ATM node was enabled.

29. (Original) The ATM node defined in claim 27 that further includes a circuit to clear each of the first connections.

30. (Original) The ATM node defined in claim 27 that further includes a circuit to receive a second message containing an identification of at least one of each of a plural number of second connections that is one of cleared from a first node and to be cleared from the first node.

31. (Original) The ATM node defined in claim 30 that further includes a database of the first connections that are cleared from the ATM node, and a data base of the first connections that are cleared from the ATM node from which are deleted those first connections that are identical to the second connections in the received second message.

32. (Original) The ATM node defined in claim 27 that further includes
a circuit to receive and interpret a second message from a coupled second node that contains an identification of a plural number of second connections; and
a circuit to clear the second connections from the ATM node.

33. (Original) The ATM node defined in claim 32 that further includes a circuit to send a third message from the ATM node to the second node that identifies a plural number of third connections, the third connections characterized by at least one of the connections cleared by the ATM node in response to the second message, and the second connections.

34. (Previously Presented) An Asynchronous Transfer Mode (ATM) node that includes
a first circuit to receive and interpret a first message comprising a single bulk release message from a first ATM node that contains an identification of a plural number of first connections, wherein the first message comprises a list of connection identifiers allowing both of consecutive connection identifiers and non-consecutive connection identifiers; and
a second circuit to clear the first connections in bulk from the ATM node.

35. (Original) The ATM node defined in claim 34 further including a third circuit to send an ATM inter-nodal call control second message from the ATM node to the first node that identifies a plural number of second connections,

the second connections characterized by at least one of the connections cleared by the ATM node in response to the first message, and the first connections.

36. (Original) The ATM node defined in claim 34 further including a circuit to enable the first circuit to interpret the first message in response to an enabling input.

37. (Currently Amended) A computer~~machine~~-readable storage medium that ~~provides~~having instructions stored therein, which when executed by a ~~computer~~at least one processor, cause said ~~computer~~processor to perform operations comprising receiving an inter-nodal message transmitted from a first Asynchronous Transfer Mode (ATM) node to a second ATM node, the inter-nodal message comprising a single bulk release message from the second ATM node that includes a list of identified connections to clear from the first ATM node, wherein the list of identified connections allows both of consecutive connections and non-consecutive connections to be identified.

38. (Currently Amended) The computer-readable storage medium of claim 37, ~~wherein the operations defined in claim 37 that further include~~[[s]] identifying a transaction identification.

39. (Currently Amended) The computer-readable storage medium of claim 37, ~~wherein the operations defined in claim 37 that further include~~[[s]] positioning a field ~~positioned~~ according to ATM protocol as a message type whose content is an identification of a type of the message.

40. (Currently Amended) A computer~~machine~~-readable storage medium that ~~provides~~having instructions stored therein, which when executed by a ~~computer~~at least one processor, cause said ~~computer~~processor to perform operations comprising:

transmitting an inter-nodal first message comprising a single bulk release message by an Asynchronous Transfer Mode (ATM) first node to an ATM second node in response to a reception by the first node of an inter-nodal second message from the second node identifying a plural number of connections to clear from the first node that includes a list of connection identifiers of the plural number of connections, the list allowing both of consecutive connection identifiers and non-consecutive connection identifiers.

41. (Currently Amended) The computer-readable storage medium of claim 40, wherein the operations defined in claim 40 that further include[[s]] identifying a transaction identification.

42. (Currently Amended) The computer-readable storage medium of claim 40, operations defined in claim 40 wherein the second message includes a transaction identification and the first message includes the transaction identification.

43. (Currently Amended) The computer-readable storage medium of claim 40, wherein the operations defined in claim 40 that further include[[s]] a positioning a field positioned according to ATM protocol as a message type whose content is an identification of a type of the first message.

44. (Currently Amended) A computer~~machine~~-readable storage medium having that provides instructions stored therein, which when executed by a computer at least one processor, cause said computer processor to perform operations comprising:

preparing at least one first message comprising a single bulk release message to be sent from a first node of an ATM network to a second node of an ATM network, each first message including an identification of a first connections to be cleared in bulk from the second node by the first message, the

identification comprising a list of connection identifiers allowing both of consecutive connection identifiers and non-consecutive connection identifiers.

45. (Currently Amended) The computer-readable storage medium of claim 44, wherein the operations~~operations defined in claim 44~~ further ~~include~~including for each said first message, clearing from the first node each said first connection.

46. (Currently Amended) The computer-readable storage medium of claim 45, wherein the operations~~defined in claim 45~~ further ~~include~~including the first node placing into a first database a record that includes an identification of each of the first connections cleared from the first node.

47. (Currently Amended) The computer-readable storage medium of claim 45, wherein the operations~~defined in claim 45~~ further ~~include~~including:

the first node placing into a first database a record that includes an identification of each first connection cleared from the first node, and into a second database a record that includes an identification of each first connection cleared from the first node;

the first node interpreting a third message received from the second node after the first message is prepared that includes an identification of at least one connection;

the first node in response to interpreting each third message, deleting from the second database the identification of each of the connections identified in the third message.

48. (Currently amended) The computer-readable storage medium of claim 44, operations defined in claim 44 wherein the first message is consistent with an Asynchronous Transfer Mode formatted message.

49. (Currently amended) The computer-readable storage medium of claim 44, wherein the operations defined in claim 44 further include~~including~~ interpreting a second message consistent with an Asynchronous Transfer Mode formatted message received from an ATM network node wherein the second message includes an identification of each of a plural number of connections to be cleared from the first node.

50. (Currently Amended) The computer-readable storage medium of claim 49, wherein the operations defined in claim 49 further include~~including~~ clearing each of the connections in the first node identified as to be cleared in the second message in response to interpreting the second message.

51. (Currently Amended) The computer-readable storage medium of claim 49, wherein the operations defined in claim 49 further include~~including~~ preparing at least one of

- a connection message to the ATM network node identifying the connections cleared by the first node in response to the first node interpreting the second message, and

- an identification message to the ATM network node identifying the second message received by the first node.

52. (Previously Presented) An Asynchronous Transfer Mode (ATM) node that includes

- means for generating an inter-nodal call control first message type comprising a single bulk release message that is to identify at least one of each of a plural number of first connections to be cleared in bulk at an ATM first node coupled to the ATM node, and each of a plural number of first connections that is one of cleared from the ATM node and to be cleared from the ATM node, wherein the single bulk release message comprises a list of connection identifiers allowing both of consecutive connection identifiers and non-consecutive connection identifiers; and

means for transmitting the first message to the first node.

53. (Original) The ATM node defined in claim 52 that further includes means for enabling one of the generation of the first message and the transmission of the first message, in response to an input if the ATM node was disabled, and for disabling one of the generation of the first message and the transmission of the first message in response to an input if the first node was enabled.

54. (Original) The ATM node defined in claim 52 that further includes means for clearing each of the first connections.

55. (Original) The ATM node defined in claim 52 that further includes means for receiving a second message type containing an identification of at least one of each of a plural number of second connections in response to the first node receiving the first message type that is one of cleared from a second node and to be cleared from the second node.

56. (Original) The ATM node defined in claim 55 that further includes a database of the first connections that are cleared from the ATM node, and a data base of the first connections that are cleared from the ATM node from which are deleted the second connections in the received second message type.

57. (Original) The ATM node defined in claim 52 that further includes means for receiving a first message type from a second node, the third message type containing an identification of a plural number of second connections; means for interpreting the received first message type; and means for clearing the second connections from the ATM node in response to the interpreting.

58. (Previously Presented) The ATM node defined in claim 57 that further includes means for sending a second message type from the ATM node to the second node that identifies a plural number of third connections, the third connections characterized by at least one of the connections cleared by the ATM node in response to the interpreting, and the second connections.